

## **AMENDMENTS TO THE SPECIFICATION**

Please amend the Specification as follows:

Please replace the section "BRIEF DESCRIPTION OF THE DRAWINGS" beginning on page 15, line 29, and continuing to page 17, line 1, with the following amended section:

Fig. 1 is a block diagram of a transmission having a synchronizing mechanism;

Fig. 2 is a block diagram of a synchronizing mechanism and a control apparatus thereof;

Fig. 3 is an explanatory diagram of the modeled synchronizing mechanism shown in Fig. 1;

Fig. 4 is a control block diagram for the control apparatus shown in Fig. 1;

~~Fig. 5~~ Fig. 5(a) is a graph showing a behavior of a sliding mode controller shown in Fig. 4, plotting the deviation ESC with respect to (k) over the deviation ESC with respect to (k-1);

Fig. 5(b) is a graph showing a behavior of a sliding mode controller shown in Fig. 4, plotting the deviation ESC over time k;

~~Fig. 6~~ Fig. 6(a) is a graph showing an effect according to a change of compliance parameter, plotting a deviation ESC over time k;

Fig. 6(b) is a graph showing an effect according to a change of compliance parameter, plotting a switching function  $\sigma$  over time k;

Fig. 6(c) is a graph showing an effect according to a change of compliance parameter, plotting a disturbance D over time k;

Fig. 7 is a graph showing a setting requirement for a reaching rule gain and an adapting rule gain;

Fig. 8 is a control block diagram of the control apparatus in which electric current feedback processing is added;

Fig. 9 is a graph showing switching timing of the controlling process;

~~Fig. 10~~ Fig. 10(a) is a block diagram of a wavelet-transform filter;

Fig. 10(b) is a graph showing gain over sampling frequency for the half band low-pass filters;

Fig 10(c) is a graph showing the phase in degrees over the sampling frequency for the half band low-pass filters;

Fig. 11 is an explanatory diagram for a decimation processing in the wavelet-transform filter;

Fig. 12 is an operational flowchart of the control apparatus;

~~Fig. 13~~ Fig 13(a) is a view showing a setting table of a target position and a compliance parameter;

Fig. 13(b) is a view showing a setting table of the compliance parameter and an actual position;

~~Fig. 14~~ Fig. 14(a) is a view showing the first step in a process for making a hole by a machine tool;

Fig. 14(b) is a view showing the second step in a process for making a hole by a machine tool;

Fig. 14(c) is a view showing the third step in a process for making a hole by a machine tool; and

Fig. 15 is a block diagram of a known synchronizing mechanism.